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**Military construction
project at Laughlin
ahead of schedule,
under budget**





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CENTERVIEWS

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Workers install the last section of 14-inch piping for the new fueling system at Laughlin AFB, Texas. Story begins on page 9.

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Suggestions and criticisms are also welcome.



View from the Center

No rest for the center of excellence

Did we all just get another year older or what?

2004 rocketed past us all, and looking around I am stunned at the amount of work we got done at AFCEE this past year, and that means only one thing – buckle up because 2005 promises to be even busier.

With the holidays passed I'd like to believe that we've all had time to rest and get ready to go again, but the truth is, the work hasn't stopped. There's been very little time to get away and reflect and prepare; not just for me but for everyone.

As an example, over the holidays we had budget analysts in AFCEE who were trying to figure out how to take their regular time off and still approve funds obligations in a timely manner, much less take any extra time away from the office.

Don't get me wrong, I'm not complaining. This is a great state of affairs; it's where you want to be when you're running the Air Force's premier environmental service center. Every time we think we've got a handle on our work-growth curve there's a new demand for our services. The demand wouldn't be there if we weren't doing top quality work, and we're not going to stop doing our best work. So as I look at 2005 all I can think of is get ready for the ride.

Inside this issue of *CenterViews* I have more to say about 2004 and the future, so I won't take any more space on that in this column. But I do have one thing on the top of my mind I'd like to share. It's related to the restructuring we went through last



*Paul Parker
AFCEE director*

year to line ourselves up with our customers' needs.

During that restructuring we wanted to provide our subject matter experts, the

folks who are the backbone of our critical role as the Air Force's center of engineering and scientific technical expertise, with an opportunity to become involved in the project management side of our business. I approved this for two reasons.

First, I believe those technically oriented people bring a unique strength to project management. They are empirically oriented, highly focused and mentally disciplined people who add depth to that process and, when given the chance, can help us improve our project management practices.

Second, I believe they will benefit from exposure to the work that goes into keeping a project on track, from beginning to end. Appropriately integrated into this side of our work they have the chance to learn new skills and enhance their career opportunities. That's important to me as the leader of this organization and as an Air Force leader who looks to the future needs of the service.

This leads me to the following statement. No matter where in the organization a technical expert sits, their first duty to AFCEE and to the Air Force is as a technical expert.

We, and I mean the Air Force "we," cannot afford to sacrifice the knowledge base that has been created here at AFCEE in the name of expedited project management. That

was definitely not the purpose for integrating technical experts into project management positions.

Why am I writing about this today? Because there have been questions inside and outside of AFCEE about our continuing dedication to being the technical brain trust for the Air Force.

In a recent meeting with AFCEE division chiefs, the folks who manage the day-to-day activities that meet our customers' needs, I made it clear that as hiring officials they are not alone when it comes time to determine how a vacancy that has been created by the departure of a technical expert in a project manager's slot will be filled.

It is AFCEE's corporate responsibility to ensure that we maintain our technical expert role by hiring and promoting people in the appropriate disciplines necessary to maintain the balance between our roles as a service center and center of expertise.

I'll have more to say about this in the future, but for now I wanted to get that on the table so that everyone knows my position on the question.

That's all I've got until the next issue. Meanwhile I, and many others from AFCEE, will be back on the road again talking to customers and suppliers to make sure we're doing right by both.

As I tell the folks here at AFCEE, if you see me walking the halls in your building someday don't hesitate to buttonhole me and let me know what you think about our work or ask me questions. That's how business gets done, person to person, one person at a time.

Oh, yeah, before I forget and its 2006 already, Happy New Year! ■



Increased business, Iraq work mark

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In 2004, AFCEE underwent a major reorganization, brought three new contract vehicles on board and handled an unprecedented increase in business all “without skipping a beat,” said Paul Parker, Center director. “I couldn’t be prouder of our people. It’s remarkable.”

It was a remarkable year that saw AFCEE’s business increase by an incredible 80 percent over the previous fiscal year.

According to Contracting Directorate figures, in FY04 AFCEE recorded more than 4,500 contract actions – a 9 percent increase over the 4,119 for FY03.

The FY04 actions were valued in excess of \$1.68 billion, compared to \$938 million for FY03.

“Certainly, our work in Iraq accounted for a large portion of that, but we saw dramatic increases in the environmental accounts as well,” said Mr. Parker.

AFCEE’s mission in the war-ravaged nation was a major and unexpected development in 2004.

It came about after Congress approved more than \$18 billion to rebuild Iraq’s infrastructure and the then Coalition Provisional Authority in Baghdad asked the Air Force for assistance.

The request eventually worked its way down to AFCEE, and it was fortuitous that the Center had just recently awarded its suite of Worldwide Environmental Restoration and Construction contracts because WERC proved to be the ideal vehicle for bringing contractors on board for work in Iraq.

The Center geared up for the job, quickly awarding \$150 million of a \$500 million restoration program for military projects, including construction of the Iraqi Ministry of Defense in Baghdad.

In addition to military work, AFCEE was asked also to construct some 450 schools in the southern part of the country and rebuild police stations.

Putting their personal safety on the line, Center project managers went to Iraq to meet with contractors and get the projects under way. In-country they traveled the dangerous roads by convoy and were under constant threat of terrorist attack.

“The people who volunteered to support this mission are dedicated Americans in every way and represent our organization, our Air Force and our nation proudly,” said Mr. Parker. “Trying to rebuild the country while the shooting and bombings continue is dangerous work.

“I pray for their (AFCEE employees’) safe return every night,” he continued. “Enough cannot be said about their families who support

them in this endeavor, and they, too, are always in my thoughts and prayers.”

Mr. Parker had praise as well for AFCEE contractors who he said “set the example every day on how to get the job done.”

A little-known fact, he revealed, is that more than 96 percent of the work in Iraq is being performed by the Iraqis themselves. They are, the director said, “bringing back to life the basic infrastructure of their country – from schools to banks to post offices to water and electricity. Their engineering and construction skills are first-rate, and that is a story that is not being told.”

The AFCEE reorganization was another big story for the Center in 2004.

It was a change sparked by a number of factors, not the least of which was the shrinking of Air Force staffs, which created an increased demand for the Center’s services, said Mr. Parker.

The modifications at AFCEE were designed to make it easier for customers to navigate through the organization by establishing a single point of contact for them.

The reorganization transformed an agency that was organized along “product lines” – the types of services it provides – to one focused on the Air Force organizations it supports.

Customers are now divided – based on their missions – among three major command installation support directorates.

Technical and Base Conversion directorates also were added to the new AFCEE structure.

Other organizations, such as the Regional Environmental Offices, did not change.

The growth in business in fiscal 2004 that Mr. Parker noted certainly was unprecedented.

It was helped along, no doubt, by three major acquisition programs that the Center put in place and gave AFCEE a potential capacity of \$16.6 billion:

- The Environmental, Construction and Operations & Services (ECOS) program consists of seven small business set-aside contracts for construction, repair and demolition work. It covers also force protection, homeland security and a host of other

environmental compliance, conservation and restoration services.

- WERC involves 15 small and 12 large business contractors that provide a full-range of construction and engineering work to meet all base requirements.

- Design Build Plus 2003 (DBP03) is used for construction of Air Force military family housing as well as commercial and institutional facilities worldwide.

The program has nine full and open contracts and six Section 8(a) small businesses, for a potential program ceiling of more than \$6 billion.

Small business was a big story in itself.

AFCEE contracting officials point to the fact that in FY04 more than 22 percent of AFCEE’s total business in the continental United States – in excess of \$203 million – was awarded to small enterprises.

And nearly 46 percent of the Center’s prime contracts went to small firms. While 71 were awarded to large firms, 38 contracts were issued to small business and 22 to Section 8(a) prime contractors.

AFCEE’s small business firms are even working alongside large companies in the rebuilding efforts in Iraq. They include Laguna Construction, Environmental Chemical Corporation, TolTest, Inc., and Cape Environmental Management, Inc.

Contract awards to small firms for work in Iraq and other overseas locations amounted to \$294 million.

Overall, about \$498 million was obligated to small businesses in FY04, according to Contracting Directorate figures.

AFCEE’s involvement in Iraq will not end with the old year.

Mr. Parker said that the Center will have a presence in the country for another two years, and a fulltime office has been set up in Baghdad.

Safety, of course, will remain a major issue.



Environmental

“Am I concerned about continued presence and safety?” Mr. Parker asked rhetorically. “My answer is an unequivocal ‘yes.’ And I will be concerned until we are finished and everyone comes home safely.”

The director said he plans to travel to Iraq himself, “to visit our new office sometime early in 2005 and get a first-hand look.”

Turning to another AFCEE core activity, Mr. Parker said he believes that “we can do more in our execution role for housing privatization.”

“I’m not satisfied with our progress to date, and we must find innovative ways to get this done faster,” he said.

In FY04, AFCEE obligated more than \$193 million for military family housing, with the agency directly managing 40 percent of housing construction projects.

Currently, the Center is managing design projects valued at more than \$9 million. These entail nearly 3,000 houses at 11 bases and five major commands.

As to what’s in store for AFCEE in 2005, the director admitted that his “prognostication skills have never been very good.”

But he did venture to say that, “I see nothing but good times ahead for AFCEE.”

“We will face budgetary hurdles and constraints like everyone else, but our staff always finds a way to make it happen,” said Mr. Parker.

“The thing that makes AFCEE so unique,” he continued, “is that despite the great things we accomplished this past year our people are committed to finding a way to do things better, and they always do.”

“We will work hard for our Air Force customers, and we are proud to serve them every day.” ■

Although construction, military family housing privatization and other programs have become increasingly important at AFCEE, the environment remains the number-one priority for the Air Force’s primary environmental organization.

This fact is made evident by the growth in the Center’s environmental restoration program, which jumped from \$223.5 million last year to \$234.4 million in 2004 – an increase of nearly \$11 million.

AFCEE director Paul Parker recently stated that the “number-one priority for 2005” would continue to be the “environmental arena.”

“I would like to see us focus more on implementation of emerging environmental technologies in an effort to clean up the sins of the past faster and cheaper,” he said. “As the Air Force Center for Environmental Excellence we need to be at the forefront of environmental leadership and lead by example. We can and will do more.”

In 2004, however, AFCEE remained the service center of choice for the major Air Force commands and installations as well as other Department of Defense agencies.

These are a few examples of AFCEE accomplishments in FY04:

work still tops at AFCEE

- AFCEE and its prime contractor, Innovative Technical Solutions, Inc. (ITSI), completed the fieldwork phase of a massive Air Force Real Property Agency project to encapsulate a drainage canal at the former Homestead AFB, Fla.

The project's goal was to prevent sediments contaminated with volatile organic compounds and heavy metals from migrating into Biscayne Bay, a highly sensitive wildlife habitat.

- AFCEE worked with Dakota Technologies, Inc. of Fargo, N.D., to develop a direct-push probe equipped with a sensor system that can detect chlorinated solvents in the subsurface without the need for a mobile lab or field chemist onsite.

The importance of a probe that can detect chlorinated solvents rests on the fact that many of these chemicals, which are known to pose a health threat to humans, are extremely difficult to locate in the subsurface.

- A 300-foot-long iron barrier was constructed at the Massachusetts Military Reservation as a way to reduce the amount of phosphorous entering Ashumet Pond on the Cape Cod installation.

The 300-foot-long, 40-foot wide and three-foot deep

geochemical trench, installed by AFCEE contractor Environmental Chemical Corporation of California, was filled with a mixture of excavated pond-bottom sediment and iron shavings.

The phosphorus sticks to the barrier's iron mixture as it flows through the pond-bottom sediments, thus reducing the amount that gets into the pond.

- The first four of five permeable reactive barriers that don't require trenches were installed in areas around the former Kelly AFB in San Antonio. The PRBs are of varying length and were dug from 22 to 25 below ground level on public streets and private property. The fifth segment will be placed along a Union Pacific Railroad right-of-way.

The PRB is a "wall" made up of millions of iron fillings the size of a medium grain of sand. As the groundwater percolates through the iron fillings a chemical reaction takes place, destroying the perchloroethylene and trichloroethene contamination.

- A new laser system was used to define soil and groundwater contamination at a number of sites at the Air Force station at King Salmon, Alaska.

The laser light is sent through a fiber optic cable into the probe rods. The cable ends

near the bottom of the rods, at a sapphire window. The laser light then goes through the window and into the soil. If there is fuel present the soil will fluoresce, and the greater the fuel concentration the greater the fluorescence.

A second fiber optic cable takes in the fluorescence light and transmits it to the surface where it is processed and plotted on a computer screen.

- An innovative technology was used to inspect a JP-8 jet fuel pipeline system for leaks and corrosion at Tonopah Test Range, Nev., a 625 square-mile area run by Nellis AFB.

The process used is called the Guided Wave Ultrasonic Technique, or GWUT, which uses a low frequency ultrasound wave to give inspectors a "picture" of a pipe's interior surface.

The Tonopah inspection, conducted by AFCEE contractor TolTest, Inc., included the evaluation of about 17,300 linear feet of fuel transfer pipeline and other procedures. One hundred percent of the pipeline was covered at 35 locations. The work included, also, pipe excavations at 25 locations and diggings at 10 other sites.

According to an industry study, about 60 percent of

hydrocarbon release incidents are due to pipe work failures.

- Through AFCEE management efforts, Malmstrom AFB, Mont., an Air Force Space Command installation, became the first northern tier Air Force location to offer E85, or fuel ethanol, to base customers.

- At the other end of the country, Hurlburt Field in Florida had the distinction of being the first base in that state to receive and issue ethanol E85 fuel to its military and government fleet.

The military service stations on base also underwent major upgrades to replace the fuel-island dispensers and two 12,000-gallon unleaded fuel tanks that were deteriorating to the point of becoming potential environmental hazards.

- Management of landscape trees on Air Force installations was made easier with a new geographic information systems tool called the Urban Tree Information System, or UTIS, which was developed jointly by AFCEE and TreesAmerica, a national nonprofit organization.

The system provides a way for landscape managers to input data on trees and other landscape features into the installation's network using a

personal digital assistance, a PDA.

The field data is downloaded directly to the installation's network. Old data is updated and incorrect information corrected – all by the same user on the same survey.

UTIS data can be used to change maintenance procedures for landscape trees, identify suitable trees for specific areas of the installation and locate potential problems.

AFCEE's environmental workload may continue to grow as a new round of base closures looms in 2005.

"We will just have to wait and see," said Mr. Parker about the possibility of new work for AFCEE. "We have enough to keep us busy, and by this time next year we will know more." ■

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We can and we
will do more.*

*– Paul Parker
AFCEE director*



Laughlin fueling system under budget, ahead of schedule

The new pump house at Laughlin AFB, Texas, is part of a 4.4 million military construction project being managed by AFCEE.



A project to build a new fueling system at Laughlin AFB, Texas, is under budget and about six months ahead of schedule.

Work began last June on construction of the system's fill stand, which dispenses the JP-8 to tanker trucks that then deliver the fuel to the trainer aircraft on the base's flight line.

The project is funded by the Defense Logistics Agency.

Located six miles east of Del Rio, Laughlin is a training base for undergraduate student pilots learning to fly the T-6A Texan II, the Air Force's primary trainer.

It replaced the T-37 Tweet, which had its final flight last September.

In addition to the new fill stand, the project includes demolishing the old fill stand, constructing a new pump house and installing new piping and electrical systems for the pump controls.

Completion of the \$4.4 million project was scheduled for April but was pushed back to May because heavy rainfall has cut into the work schedule, said AFCEE team chief Tom Guelzow.

"The project was generated because back in 1996 the original fill stand was shut down due to leaks and environmental concerns, and it was turned into an IRP (Installation Restoration Program) site," he said.

Drivers were then forced to fill their trucks directly out of the three fuel tanks and drive across Liberty Drive, the main base thoroughfare, on their way to the flight line.

Base officials, however, decided that "it was dangerous to have all those R-11 (trucks) full of fuel going across the main road," said Mr. Guelzow.

The increased tempo of the base's flying mission was another reason for installing the new system.

"They were flying 350 sorties a day, now it's 25 percent more," he said.

The number of T-6As in the Laughlin fleet currently number 80 and will continue to grow, said the team chief.

In the meantime, the fuel system's capacity will double from 1,200 to 2,400

gallons per minute after the project is completed, said Mr. Guelzow.

Robert Tennyson, project manager with Weston Solutions, Inc., the prime AFCEE contractor, explained how the system works.

The JP-8 fuel is stored in three tanks located on the installation's petroleum, oils and lubricants, or POL, site.

From the tanks the fuel goes into 780 feet of 14-and-a-half inch pipes, which carry it to the pump house. There, four 100 horsepower pumps send the fuel through another pipeline to the fill stand more than 2,000 feet away.

"A single pump can operate or all four pumps can operate at the same time to deliver the fuel," said Mr. Tennyson. "The design is for a minimum of 600 gallons a minute per pump, a total of up to 2,400 gallons a minute through the pipeline."

The pipe that transports the fuel to the fill stand was tunneled under Liberty Drive.

To avoid impacting Laughlin's mission, only one tank was offline at a time during installation of the new pump house manifolds, and the old system will continue to function in case there are delays in starting up the new one.

"The base has been very helpful," said Mr. Guelzow. "When we had to take those tanks out of service to work on the manifold, they were right on time."

He said also that AFCEE was awarded the Laughlin project because of past performance on a previous fill stand.

The engineering flight chief at the time was so impressed with AFCEE's work, said Mr. Guelzow, that he wrote a letter to major command headquarters recommending that the Center be the base's service center once more.

Major command officials, in turn, wrote a letter to the Department of Defense again asking for AFCEE's assistance.

"That letter took a concurrence from the Army Corps of Engineers to let us take their design and build the project," said Mr. Guelzow. "We got that concurrence. It took about four months to coordinate all that."

Originally, the contract for the new system called also for two other options. One was construction of a canopy to cover the fill stand. The other was a parking area for the tanker trucks, which would make refueling easier for the drivers.

"We wanted the canopy because it gets hot down there – about 110 degrees in the summer," said Mr. Guelzow.

Base officials were skeptical that all that could be done for the \$4.4 million figure.

But when the proposals came in, they found that the base could get the new fueling system, the canopy and the parking area for that amount, Mr. Guelzow said.

In addition to Mr. Guelzow, the other members of the AFCEE team are contracting officer Ed Custodio and Burt Harrison, program manager.

Mr. Harrison attributed the success of the Laughlin project to the Center's use of the team concept, which brings together representatives from the contractor, the Contracting directorate, the Major Command and Installation Support Directorate and the base "to get the projects done."

The work at Laughlin, he added, "demonstrates that AFCEE has the technical and contracting expertise to handle large MILCON (military construction) projects."

"Both technical and contracting personnel are constantly monitoring the project, looking at reports, funding and project status and making frequent site visits," said Mr. Custodio. ■

E85 makes Malmstrom debut



(Courtesy photo)

New fuel is a gas. Maj. Yolanda Jackson, 341 Logistics Readiness Squadron commander, receives the first tank full of E85 at a Malmstrom AFB, Mont., military service station. The installation was the first northern tier base in the Air Force to issue the alternative fuel.

Malmstrom AFB, Mont., an Air Force Space Command installation, is the first northern tier location in the Air Force to offer E85, or fuel ethanol, to base customers.

E85 is a cleaner, “greener” hybrid fuel that is a blend of 85 percent denatured

ethanol and 15 percent gasoline.

Denatured ethanol is basically alcohol that has been adulterated so that it is useless for human consumption.

Ethanol is manufactured from grain farming, making it a renewable energy source, said AFCEE program manager Lonnie Wolfe.

It is also an oxygenated fuel, which makes it cleaner-burning than petroleum and thus non-threatening to the environment, he added.

Ethanol usage was first mandated by the Energy Policy Act of 1992.

In addition, Executive Order 13149, issued in 2001, calls for the federal government to exercise “leadership in the reduction of petroleum consumption through improvements in fleet fuel efficiency and the use of alternative fuel vehicles and alternative fuels.”

The EO sets a goal of reducing annual petroleum consumption by at least 20 percent by the end of fiscal year 2005, compared with FY



Routine remediation operations automated at former Kelly AFB

1999 petroleum-consumption levels.

Mr. Wolfe noted that Space Command has been in the forefront of implementing the executive order's "aggressive targets for federal-fleet vehicles."

Malmstrom is home to the Air Force Space Command's 341st Space Wing.

The unit's mission requires its personnel to routinely travel over large tracts of remote and rugged backcountry.

"In severe winter weather, vehicle travel can become a major undertaking even for routine fuel support missions," said Mr. Wolfe. "We're sure the new E85 fuel capability will not only enhance the local air quality but also provide the Malmstrom staff with many miles of reliable, safe and smooth-running operations." ■



Meter reader: An engineering technician uses a hand-held computer to record readings from a recovery well water meter.

Routine operations and maintenance of groundwater and soil remediation systems at the former Kelly AFB, Texas, have been automated with what is called the supervisory controls and data acquisition, or SCADA, system.

The former base is managed by the Air Force Real Property Agency, the AFRPA.

SCADA replaces the traditional way of doing field data collection, which was for operators to go out to the sites, enter information into a logbook and later transfer it manually into an electronic database.

But because of the large amount of data involved and its manual input, there was always the potential for loss of information vital to system evaluation.

Because of the large amount of data involved and its manual input, there was always the potential for loss of information vital to system evaluation.

SCADA, however, automates the controls- and data-collection effort.

The system includes two human machine interface computers placed in separate locations in the former base's central water treatment plant.

The computers' custom-designed software displays 25 graphic screens that show real-time animated representations of what is taking place in the plant, such as tank levels, pump status, water flows and other processes.

Operators can enter control settings for variable speed pumps and tank control set points as well as other operational data.

Operators also use two notebook computers to access the facility over dialup phone lines. All functions that are available at the on-site computers are available also over the dial-up connection.

This feature allows the central treatment plan to be remotely operated and reduces

unscheduled trips by the operator to respond to equipment failure or make process changes at the plant.

Kelly AFRPA technical program manager William Hall and AFCEE contractor Science Applications International Corporation developed a database that tracks and manages

collected field data as well as electronic data from automated system monitoring equipment.

The types of data being collected in the

field consist mainly of flow rates, readings, system down-time, large equipment inventory and water sampling information.

Data that relates specifically to the treatment of recovered groundwater are being collected electronically and integrated into the database on a regular basis.

A pilot test is being completed by field personnel using electronic data collection devices to collect the required field data that will go into the database.

These data are then downloaded on a daily basis, thus reducing the probability of data loss and the manual entry of field logbook information or data forms.

Based on the results of the pilot test, the preferred data recording devices may be used to track the required daily field activities. ■

(Information provided by the Science Applications International Corporation.)



Library is reference point for environmental issues

The Joint Service Pollution Prevention Technical Library is an inter-service and interagency cooperative Website that provides a single point of reference for pertinent

It offers success stories and lessons learned from other installations that share similar environmental concerns and helps readers perform their jobs more effectively.

The library promotes the concept that cost-effective environmental protection is best achieved through programs that avoid or minimize prob-

lems, rather than react to them. For the past decade, the library has provided access to cutting-edge environmental

The Environmental Management System Library is the “most comprehensive and up-to-date EMS source available to federal agencies.”

– Office of the Federal Environmental Executive

and timely information about pollution prevention (P2), green procurement, Environmental Management Systems and other environmental issues.

The library (found at <http://p2library.nfesc.navy.mil/>) provides valuable information and access to resources about current and emerging environmental issues of vital importance to mission readiness and effective operations.

solutions relevant to Department of Defense operations.

As the DOD moves toward sustainable installations, the library continues to offer the most up-to-date information to help joint services installations and facilities proactively plan for the future of their missions within the context of environmental stewardship.

P2 opportunity topics of vital interest to the military and the federal environmental community are the library's

focal point. Topics include air quality, range management, solid-waste management, wastewater, sustainable development and many other issues.

Information and resources related to all P2 opportunity topics are organized by these subject areas:

- Documents, which include guidance manuals, handbooks, policies, Web/software tools, research reports and more from the joint services, federal agencies and other public and private sources.
- Fact sheets from the joint services and other resources.
- P2 opportunity handbook data sheets that describe P2 technologies and/or applications currently in use at joint service installations or provide overviews about important environmental issues.
- Presentations about environmental issues from 2001 through 2004.
- Success stories from the joint services, federal facilities and other resources.
- Web links that provide quick access to military, government and private environmental Websites.

Several new features have recently been added.

- Emerging environmental issues deal with developments that impact environmental operations and missions at joint service installations and other federal facilities.
- Featured resource of the week offers information about, and a direct link to, a new resource that provides pertinent and timely information about an environmental issue of importance to joint service installation environmental professionals.
- *Share your success story* provides joint service installation staff members the opportunity to share their success stories with others who may experience similar problems and concerns.

Other major issues featured in the library include green procurement and environmental management systems.

Green procurement is a regulatory issue that will have a major impact on the future purchasing

practices – and operations – of all joint service installations and federal facilities.

The EMS Library has been described by the Office of the Federal Environmental Executive as “the most comprehensive and up-to-date EMS resource available to federal agencies.”

The EMS Library provides one-stop access to the most recent EMS policies and directives, as well as templates, training modules and success stories from each of the joint services.

Many of these resources are not available from any other source. The availability of a resource specific to EMS issues enables joint service and civilian federal facility personnel to access pertinent and timely information as they move toward the Dec. 31, 2005 deadline for EMS implementation.

In addition to information and resources from the DOD, federal, international, state and local governments and private organizations, the EMS Library features also these four unique resources:

- The EMS Library Homepage provides a logical and progressive month-by-month approach to EMS implementation, introducing a new *EMS Topic* each month. This feature is referred to as the “road to successful EMS implementation.”
- The EMS success stories feature lets joint service installations share their successes with others who may have similar missions, operations and concerns.
- The EMS roadmap is a flow diagram outlining key issues that should be considered before, and during, the EMS implementation process.
- Legal requirements outline the basic legal considerations that must be addressed when implementing an EMS. Links to major federal laws, executive orders and DOD directives and instructions are provided.

The Joint Service Pollution Prevention Technical Library makes it easy to find the information about current environmental concerns. ■



RPO helps get 'more bang for the buck'

Air Force senior leaders say that the greatest challenge facing the service's environmental efforts today is finding ways to cut the costs associated with remediation systems and monitoring programs.

One proven approach is Remedial Process Optimization.

RPO is a systematic way to evaluate and improve the effectiveness of site remediation so that maximum benefit is achieved for each dollar spent – or as the old cliché goes, “getting more bang for the buck.”

Although not an entirely new program, RPO has gotten increased emphasis as part of the new Air Force Cleanup Program Performance-Based Management Policy being promoted by Maureen Koetz, deputy assistant secretary of the Air Force for environment, safety and occupational health in Washington.

About two years ago, Air Staff established the Air Force's RPO Outreach Office within AFCEE's Technical Directorate, thus assigning the Center the key role of helping the major commands with their individual optimization programs.

“The RPO Outreach Office provides true one-stop shopping for AFCEE customers,” said John Gillespie, RPO office program manager. “Specifically, the office helps answer the question, ‘how should I go about integrating optimization into my environmental programs?’”

The rest of the RPO office staff are contractor personnel Amie Price and Rebecca Ortiz and Phil Hunter of the Base Conversion Directorate who serves as the RPO long-term monitoring program manager.

Air Force senior leaders had challenged the service's environmental professionals to find ways to “instill discipline into our environmental programs and show full-cost visibility.”

The key to meeting this challenge, Mr. Gillespie said, was to change the way in which information on remediation systems and monitoring programs is captured.

Working with Air Staff and the major commands, the RPO outreach office produced a business model that focuses on end results instead of a process.

The office developed also, for less than \$40,000, a

prototype computer tool called the Inventory and Optimization Prioritization Software, or RIPS.

RIPS captures the true cost of O&M (operations and maintenance) for a system and will track any progress made over time.

"The vision is to give the Air Force environmental professional a model that integrates RPO at every level and gives the installation restoration program manager a tool for reporting success up the chain of command," said Jim Gonzales, chief of the Technical Directorate's Science and Engineering Division.

The first step in the process is to establish an optimization baseline which can be used to track trends and then use the results to make decisions about specific sites.

This business-type approach, Mr. Gonzales added, gives major command environmental chiefs a complete picture of what a cleanup process is costing the organization and, more importantly, how effectively a remediation system is working.

Major command officials can then see what works, where they can cut costs and what sites are not

worth investing money in for now.

The process thus allows the major commands to prioritize the contaminated sites they want to remediate, letting them focus their limited resources on areas where they can get the most cost benefit, said Mr. Gillespie.

An added plus of using the RIPS tool is that it helps the major commands build an inventory of active remediation systems and long-term monitoring programs.

"Air Staff now wants this strategy to serve as the business model for the Air Force for implementing and executing RPO," Mr. Gillespie said.

Toward that end, Air Staff drafted an initial policy and sent it to the major commands for their comment. The purpose of the policy is to guide the commands in implementing a standardized optimization strategy.

RPO already has a successful track record. Some examples:

- Jerry Hansen of AFCEE's Major Command and Installation Support-Worldwide Directorate pulled together previously collected data to successfully make the case for closing eight sites belonging to Elmendorf AFB, Alaska – at a

cost of only \$5,000 per site, said officials.

- Air Mobility Command officials partnered with the AFCEE RPO Outreach Office to evaluate a number of sites on their bases.

One of those installations, Edwards AFB, Calif., was then able to negotiate with state regulators to reduce the costs of long-term monitoring of sites there, producing a \$1.7 million savings for the Air Force.

"As the Air Force gears up to launch RPO across all major commands, AFCEE's RPO Outreach Office is postured to meet the Air Force's needs," said Mr. Gillespie. ■



Environmental awards honor

'exceptional contributions'

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The Air Force has named the winners of the 2004 General Thomas D. White Environmental Awards, which honors the installations and individuals making exceptional contributions to the Air Force environmental program.

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An award-presentation ceremony will be held at the Pentagon on May 4.

All but two of the winners will go on to compete for the Department of Defense award in the same categories.

There is no equivalent award for the reserve component or the NEPA award at the DOD level.

.....

- Winners of the Environmental Quality Awards are:
Industrial Installation – Tinker AFB, Okla., Air Force Material Command;
Reserve Component – Grissom Air Reserve Base, Ind., Air Force Reserve Command;
Overseas Installation – Misawa Air Base, Japan, Pacific Air Forces.
- Recipients of Pollution Prevention Awards are:
Non-Industrial Installation – Hurlburt Field, Fla., Air Force Special Operations Command;
Individual/Team Excellence – Tinker AFB Pollution Prevention Team, Tinker AFB, Okla., AFMC.
- Winners of the Cultural Resources Management Awards are:
Installation – Hickam AFB, Hawaii, PACAF;
Individual/Team Excellence – Takeshi Ukon from the 35th Civil Engineer Squadron at Misawa AB, Japan, PACAF.
- Recipient of the Natural Resources Conservation Award, Large Installation – Arnold AFB, Tenn., AFMC.
- Winner of the Restoration Award, Installation – Keesler AFB, Miss., Air Education Training Command.
- Recipient of the National Environmental Policy Act Award for Team Excellence – Eglin Environmental Impact Analysis Process Team, Eglin AFB, Fla., AFMC.



FEET OF CLAY

Col. Rich Fryer, AFCEE executive director, (right) and executive officer Capt. David Gilliam, stand on the “shoulder” of a huge statue of Saddam Hussein during a recent visit to Iraq. The megalomaniacal dictator is portrayed wearing a warrior’s helmet from the time of Hammurabi, the king of ancient Babylon. The Center officials toured the various facilities being reconstructed or built by AFCEE contractors, including the new Ministry of Defense building. Colonel Fryer said the ornate plaster work being done by Iraqis at the ministry building was nothing short of “astonishing.”





Andrews upgrades its fueling system

More than \$8.5 million in fueling-system upgrades have been made at Andrews AFB, Md., over the past year.

Officials there said the AFCEE-managed projects will provide a state-of-the-art system that will work within the existing fueling infrastructure while integrating new portions as they are added.

The work was done by AFCEE contractor TolTest and supervised by the Andrews base civil engineer staff.

The 17 projects are being funded by the Defense Energy Support Center based at Fort Belvoir, Va.

The projects addressed also a regulatory noncompliance issue related to a notice of violation, or NOV, issued earlier this year by the Environmental Protection Agency.

The EPA directed Andrews to upgrade its fuel-tank secondary containments by last October.



(Courtesy photo)

Big container. One of the two fuel tanks repaired at Andrews AFB, Md., under a more than \$8.5 million fueling-system upgrade program managed by AFCEE.

These are some of the completed projects:

- Nearly \$2 million worth of repairs were made to two fuel tanks, which included installation of new tank bottoms, level alarms and anti-corrosive systems; and

construction of spill containments. The tanks were then painted inside and out.

Constructing the spill containments included removing 8 inches of existing gravel and asphalt and installing a 4-inch sand cushion layer, a flexible membrane liner and 4 inches of reinforced concrete.

Crews then installed an overflow notch between the two tanks to increase the storage capacity of the spill containment structure. Ancillary piping and valves also were replaced as part of the project.

This approach provided the required spill-containment capacity while maintaining compliance with military, EPA and State of Maryland regulations, said base officials.

They added that it resulted also in less site work and excavation than originally anticipated, producing a savings of about \$250,000.

The secondary containment structure was tested in September and found to be adequate for containing tank contents.

• Another key fueling systems upgrade project was installing two new state-of-the-art single-position fill stands to replace a pair of old refueling islands. The work was completed in phases so that one

island was always open, thus preventing disruption in service to base users.

This project included installing a concrete containment structure and replacing piping, electrical, lighting and corrosion-protection systems.

Work at the site was finished well before the EPA's October 1 deadline, and

the agency determined it to be environmentally compliant.

• A secondary containment system/parking area for eight R-11

The more than \$8.5 million in fueling-system upgrades made at Andrews AFB, Md., over the past year will provide a state-of-art system that will work within the existing fueling infrastructure while integrating new portions as they are added.

aircraft refueling tank trucks was constructed. This parking lot doubles as a spill-containment area capable of retaining a 6,600-gallon spill of JP-8 jet fuel.

The area is covered with an asphalt sub-base, surface coat and joint sealant in the concrete joints. Work also was in time to meet the October 1 regulatory deadline.

• Other related fuels work included construction of a secondary containment at two military gas stations, secondary containment of the truck parking area at Hangar 19 and similar projects.

In all, Andrews oversaw nine NOV compliance DESC projects valued at \$4.1 million plus an additional eight valued at \$4.4 million. ■



Pond excavation solves two problems at Beale

On one part of the base, officials at Beale AFB, Calif., were faced with the problem of what to do with the excess water being generated by the installation's wastewater treatment plant.

The situation was manageable during the hot and dry summer months of Northern California, when the water was used on the base golf course to create a green haven in a sea of parched grassland.

But during the cool and moist winter months, the treated wastewater had to be stored in the pond because the base's National Pollutant Discharge Elimination System, or NPDES, permit, did not allow the treated water to be discharged into nearby Hutchinson Creek.

Meanwhile, in another area of the base, members of the environmental restoration program staff were pondering how to remediate a former landfill contaminated with metals.

The staff's solution was to cover the landfill with up to four feet of soil, thus preventing base personnel and environment from being exposed to the contamination.

The problem with this idea, however, had to do with costs: Bringing material from off base to cover the landfill was very expensive.

So, faced with the need for both additional wastewater storage and cover material for the landfill, the Beale environmental flight staff worked with AFCEE to come up with a simple yet effective solution.

The idea was to excavate material from the pond during the dry summer months, when the water level is low, and use that as landfill cover. At the same time the pond excavation would create additional space to

help meet storage requirements for the treated wastewater.

Realizing that the idea offered solutions to both situations, AFCEE project manager Vincent Laborde partnered with Air Combat Command Headquarters staff and contractor CH2M HILL to turn the concept into reality.

Also on board were state regulators and the base's civil engineering squadron.

AFCEE then issued a task order with the contractor to get the project done.

Still not satisfied, however, AFCEE asked the base natural resources staff to grade and scarify the top of the landfill cover so the soil could be loosened to support vegetation.

Additionally, the agency arranged to have the cap seeded to promote the spread of native vegetation in that area of the base.

Another part of the project was mitigation to protect special-status species habitat affected by the cover placement.

The pond itself will be configured to reduce the marsh grass that attracts the birds that pose a danger to the base's flying mission.

Also, the additional treated wastewater storage at the site will help the base comply with present and future NPDES requirements.

All together, the project saved the Air Force about \$1 million. Soil procurement and hauling from off base would have cost about \$800,000 and several hundred thousand more dollars would have been added if the pond excavation had been done on a separate procurement.

In addition to the cost savings, many other benefits were reaped by this project, not the least of which is the increased value of the base's natural resources. ■

(Information for this article provide by Michael O'Brien, restoration element chief, Beale AFB, Calif.)



Material is excavated from a pond on Beale AFB, Calif., to be used as a cover for a former contaminated landfill. The excavation also expanded the pond's treated wastewater storage capacity.



New kennel facility is 'a real good-looking building'

*– Paula Shaw,
49th Civil Engineering Squadron –*

A FCEE may be the Air Force's center of expertise for military family housing, but its customers include other types of service member – the four-legged kind.

The Center recently managed construction of a kennel to house 13 military working dogs assigned to the 49th Security Forces at Holloman AFB, N.M.

Built by AFCEE contractor TolTest, Inc., of Toledo, Ohio, the 3,300-square-foot masonry structure features a metal roof, blast-proof windows and eleven air-conditioned rooms.

The facility includes a 25,000-square-foot landscaped, lighted and fenced training area as well as a doggie "break area" complete with "fire hydrant" for the hard-working canines.

Meals for the military dogs are

'Dog's life' for military canines not too bad



Dog house. AFCEE managed construction of this 3,300 square-foot kennel for military working dogs at Holloman AFB, N.M.

readied in a food preparation room, and after a long day on the job the animals relax in a stainless-steel grooming tub equipped with retractable ramp.

A veterinarian room complete with isolation kennel serves the dogs' health needs.

AFCEE team chief Maj. Winston Shaffer said that the project, which he called the "best dog kennel in the states," was completed in 75 days.

"TolTest was flexible and accommodating," he said. "The kennel master was thrilled, and the kennel will likely win awards."

On a final walk-through of the kennel, Paula Shaw of the base's 49th Civil Engineering Squadron called it "a really good-looking building" and added that she was "very pleased" with the final product. ■



Dog tired. Doggie "break area" equipped with fire hydrant in the new military dog kennel recently constructed at Holloman AFB, N.M.



Housing program resumes at Bolling



Work continues. Project manager Juan Perez stands in front of one of the new military family housing units at Bolling AFB, D.C. AFCEE was able to iron out a series of issues that had stopped construction of the \$30 million housing program.

AFCEE recently came to the rescue of a \$30 million military family housing program at Bolling AFB, D.C., that had come to a stop because of a number of issues.

The housing program calls for construction of 200 new townhouses and duplexes for enlisted personnel.

With AFCEE taking over management, problems have been “smoothed out” and the housing program is back on track, officials said.

The Center originally awarded the fiscal 2001 and 2002 military family housing construction projects to Harkins Builders, Inc., under two contracts issued in 1999.

In 2003, however, mold was found on construction material for the FY 2001 project and the contractor was ordered to stop work. Housing units at the time were from 28 to 97 percent complete.

Then the following year a stop-work order was issued for the FY 2002 project because of concerns the base had about proper material storage procedures. Only minor work had been done on unit foundations

and plumbing at this stage.

When the base and the contractor could not arrive at solutions that were agreeable to both parties, work was halted on the projects.

Last June, however, AFCEE assumed contract management for the two housing projects.

The Center is now providing on-site construction investigation support and generally making sure that the work is being done properly.

AFCEE was also able to work out a number of construction issues that had arisen between the base and the builder,

including the payment of overdue invoices to the contractor, said Center officials.

Additionally, over the past several months, AFCEE and Bolling officials teamed to conduct an extensive investigation of the houses, resulting in a mold-remediation plan that will allow the builder to complete construction, officials said.

Also, the Center: awarded a contract for design and construction of a critical electrical and communications infrastructure; coordinated with the privatized water utility for approval of the water and wastewater plans; and negotiated with the gas utility for construction of gas distribution lines.

Now that construction is again under way, AFCEE project manager Juan Perez said

that he expects the “first 90 homes from the FY01 project to be complete around May 2005.”

To be sure that the projects stay on course, Mr. Perez and contract officer Charles Wilcox conduct weekly status teleconferences that include representatives from the contractor and Bolling as well as onsite support personnel.

“The homes will provide members of the Bolling community many different floor plans, with either three or four bedrooms,” said the project manager. “Residents will be only a short walk from the banks of the Potomac River and one of the most spectacular views of the Washington, D.C., skyline.” ■



Monumental view. The new military family housing at Bolling AFB, D.C., near the banks of the Potomac River, offers a great view of downtown Washington, including the Washington Monument.



By Don Ficklen
Program Manager

Fort Worth PRB proving successful

Two years ago AFCEE contractor HydroGeoLogic Inc., constructed a permeable reactive barrier, or PRB, as a technology demonstration project at the former Carswell AFB, Texas, now Fort Worth Naval Air Station Joint Reserve Base.

A PRB is a trench filled with reactive materials that change groundwater contaminants into harmless substances as they pass through the “wall.”

Before the PRB was installed, untreated groundwater at the base contained trichloroethene (TCE) in concentrations reaching 2,500 ug/L (micrograms per liter) above the federal maximum contaminant level of 5 ug/L.

In addition to TCE, the groundwater was contaminated also with 1, 2 dichloroethene (DCE) and vinyl chloride (VC) at concentrations exceeding federal cleanup levels.

The reactive material used in the Fort Worth PRB is zero-valent iron, known as ZVI, which can degrade the three contaminants into a non-toxic compound called ethene that eventually breaks down into carbon dioxide and water.

The ZVI itself is harmless to the environment.

At 1,126 feet in length, the Fort Worth PRB is the world’s longest continuous reactive barrier and contains a 2-foot thick equal mixture of ZVI and sand that extends from a depth of 2 to 3 feet above the groundwater table to the top of bedrock, averaging 38 feet below ground surface.

The bedrock restricts the vertical migration of groundwater, keeping the contaminants to depths above the top of bedrock.

The saturated thickness of the water-

bearing zone ranges from 10 to 12 feet.

The PRB is a single continuous trench. It was designed that way to take into account a nearby landfill and other surface activities.

The trench was constructed using biodegradable biopolymer slurry composed of guar gum and stabilizers to act as a liquid shoring material.

Guar gum, derived from the seed of specially grown bean plants, is a complex carbohydrate readily degraded by the microbes present in the soil and groundwater.

Liquid shoring is often the only practical means of excavation support during the construction of deep trenches.

After the trench was backfilled, an enzyme was circulated throughout the reactive media to promote the guar gum’s breakdown. Normal groundwater flow returned once the guar gum degraded.

The PRB’s performance has been monitored quarterly since its construction by analyzing groundwater samples taken from a network of monitoring wells.

.....
The Fort Worth permeable reactive barrier has proven to be successful technology for removing contaminants from the groundwater.
.....

Transects, or lines of monitoring wells, are located up-gradient and down-gradient of the PRB and inside the barrier itself.

Since the beginning of sampling in June 2002, results have shown that the PRB has maintained a TCE removal rate of 99.5 percent.

And it is estimated that the barrier removes about 980 pounds of TCE per year from the groundwater, based on the pre-treatment concentrations of TCE in the groundwater and the volume of groundwater that moves through the PRB.

Additionally, TCE concentrations in the “toe” of the contaminated groundwater plume have decreased from 2,500 ug/L to less than 1,000 ug/L, and the majority of down-gradient monitoring wells contain concentrations of TCE substantially less than 500 ug/L.

The monitoring data indicate, too, that natural microbial activity is playing a part in contaminant degradation. It is hypothesized that the native microbes were stimulated by the introduction of the biopolymer slurry.

The efficiency of DCE and VC removal has varied at the monitor well lines, probably because of the differences in microbial populations along the transects.

The Fort Worth PRB has proven to be successful technology for removing contaminants from the groundwater.

In addition, once a PRB is constructed, it has minimal operating and maintenance costs, produces no waste stream that must be managed and only slightly impacts the sites where the barrier is located.

In the case of the Fort Worth PRB, the groundwater cleanup has helped to expedite the upcoming transfer of the Base Realignment and Closure property located down-gradient of the barrier.

Operation of the PRB is anticipated to continue until 2012, or until contaminant concentrations in the groundwater decrease to below regulatory cleanup levels. ■

BEFORE AND AFTER



These diagrams show the reduction of groundwater contamination since the construction of a permeable reactive barrier at the former Carswell AFB, Texas.





A ten-judge panel met here recently to evaluate the 118 entries submitted for the 2005 Air Force Design Awards competition.

The entries fall in seven categories, ranging from planning studies to family housing.

Awards officials said the program's purpose is

There are no age or cost limitations for entries, nor is there a limit to the number of times a project may be submitted for competition, providing that the project has not previously won an Air Force Design Award. An entry, however, can't compete in more than one category at a time, according to contest rules.

Judges view Air Force Design Awards entries



(Photo by Margaret Moore)

Judging excellence. Members of the planning/urban design/landscape sub jury review entries for the 2005 Air Force Design Awards competition. Shown (left to right) are Roxann Reza, who is not a judge but an AFCEE in-house contractors who assists in the competition; Tom Curley of HOK, Inc., New York; and Jim Roesch of Parsons in San Antonio. Behind Mr. Roesch is Bruce Johnson of WJA Design Collaborative, Seattle.

to publicize and recognize projects that have achieved the Air Force goal of design excellence as it relates to natural and built environments.

The awards program is managed by AFCEE.

Beginning with the highest, the recognitions is giving in three levels: the Honor Award, the Merit Award and the Citation Award.

The awards process is completely automated, with organizations submitting their entries via the program's Website at <http://www.afcee.brooks.af.mil/products/awards/design/index.asp>.

The Webpage is designed so that submittals are first approved by the responsible organization before they go to AFCEE.

Concept Design entries can win in that category and may be submitted again in a different category when the project is actually constructed.

Organizations involved in any aspect of an Air Force project can submit an entry, provided they send it through the major command, direct-reporting unit or forward-operating agency that is using or will be using the facility to be judged.

The submittal process began last May, when AFCEE put out the call for entries. Entry deadline was in November, and the jury convened in early January. Winners will be announced by

the Office of the Air Force Civil Engineer in mid-February, with the awards presentation to be made in July at an awards luncheon in Washington, D.C.

Jury members for the 2005 awards were: Tom Curley, The HOK Planning Group, New York; Jim Roesch, Parsons, San Antonio; Bruce Johnson, WJA Design Collaborative, Seattle; Gene Mesick, Office of the Air Force Civil Engineer; and Garland Scott, Headquarters Air Education and Training Command, Randolph AFB, Texas.

Also on the panel were: Michael Panczykowski, Pond & Company, Atlanta; Jim Thompson, U.S. Department of Agriculture, Missoula, Mont.; George Auten, The Atriax Group, Hickory, N.C.; Mary Burke, Gruzen Samton, LLP, New York; Sandra Warner, AFCEE; and Angie Tschirhart, Herman Miller Workplace Resource, San Antonio.

The U.S. Air Force Design Awards Program was established in 1976 to recognize and promote design excellence. It is now widely recognized throughout the federal government and supported by notable professionals in the private sector.

The program is more than an awards competition, officials note. The winning projects establish the benchmark of design excellence that the Air Force expects for all its facilities and installations.

The program itself received the 2000 Federal Design Achievement Award which recognizes exceptional design achievement from all sectors of the federal government, said officials. ■



TolTest is 2004 outstanding small business environmental contractor

TolTest, an Ohio-based firm, is the Outstanding Small Business Contractor in the Environmental Category for 2004.

Officials with the Brooks City-Base's 311th Human Systems Wing made the announcement at the annual Minority Enterprise Development Week "Breakfast at Brooks" sponsored by the U.S. Department of Commerce Minority Business Development Agency and the U.S. Small Business Administration.

Company vice presidents Ernest Enrique and David Alleman were on hand to accept the award.

The honor recognizes the small businesses that significantly help Brooks City-Base organizations meet their missions.

All the major organizations on Brooks were asked to submit their top-performing small business contractors for fiscal year 2004 in the mission-related areas of environmental, specialized support and systems.

TolTest was the only small contractor nominated by AFCEE in the environmental category, said officials with the Brooks Small Business Office.

The company, which currently is supporting AFCEE's reconstruction work in Iraq, was nominated by the Center's Major Command and Installation Support Group (Gold Team). ■



(From left) Col. Laura Alvarado, 311th Human System Wing vice commander, Brooks City-Base; Mary Urey, Brooks City-Base small business director; and Ernest Enrique, TolTest vice president, pose with the award naming the firm the Outstanding Small Business Contractor in the Environmental Category for 2004.



People at the Center

Contracting Directorate brings home honors



Mary Lou Martinez

AFCEE teammates in the Acquisition and Contracting Directorate came away with an armful of honors presented during the 2004 Aeronautical Systems Center/Contracting Awards banquet at Wright-Patterson AFB, Ohio.

The entire directorate was recognized in the Outstand-

ing Contracting Unit/Team (Specialized) category while the Iraq Reconstruction Team received the Special Recognition Award.

In the individual categories, **Kimberly W. Drake**, supervisory contract specialist, was named Outstanding Contracting Civilian (Specialized) and procurement technician **Mary Lou Martinez** won the top Contracting Support (Civilian) honor.

The winners will now go on to compete for the Air Force Materiel Command level awards.

Good idea pays off

Don Ficklen, a program manager with AFCEE's MAJCOM and Installation Support – World-wide Directorate, received a \$5,000 cash award for his suggestion to reuse treated lead-contaminated soil taken from a cleanup site at Lackland AFB, Texas.

Mr. Ficklen submitted the idea while an employee with the base's 37th Civil Engineer Squadron.

He recommended that soil taken from a closed small-arms range and treated for lead contamination be used to construct an intermediate cap over an adjacent abandoned hazardous waste landfill.

Base officials said that the normal procedure would have been to dispose of the material in an off-base permitted landfill that accepts treated soil.

They estimated that costs associated with transporting and disposing of the treated soil would have cost the Air Force about \$5.8 million – 84,000 yards of soil at \$69 a yard.

Mr. Ficklen's idea was pitched to the state's environmental regulatory agency, which accepted the recommendation.

A final, impermeable cap was placed over the intermediate cap, isolating the excavated soils from the environment and preventing rainwater from percolating through the landfill.

Mr. Ficklen made his recommendation through the Air Force's Innovative Development through Employee Awareness, or IDEA, program.

IDEA is the successor to the old Air Force Suggestion Program. Its purpose is to solicit money- and work-saving ideas from people in the field.

As an incentive for individuals to submit their recommendations, anyone who submits an idea that is approved and accepted by the Air Force receives a monetary reward.

The program rewards both tangible and intangible ideas. Those who submit an approved intangible idea receive a \$200 award while a winning tangible idea can earn the individual a maximum of \$10,000.

The latter amount is based on a 15 percent first-year savings generated by the idea.

Graphic artist retires

Clarence "Chuck" Brewer, long a member of the AFCEE graphics section, retired in December after serving a combined total of forty years in both the military and civil service.

An audiovisual specialist with the Public Affairs and Multimedia Division, he is an accomplished photographer, illustrator and cartoonist.

Mr. Brewer joined AFCEE in 1993 after nine years as an engineering supervisor with Electronic Security Command Headquarters (now the Air Force Intelligence Agency) at the former Kelly AFB, Texas.



"Chuck" Brewer and "self-portrait"

He began an Army career in 1958, working as a draftsman, cartographer and illustrator until his retirement as a sergeant first class in 1978.

Mr. Brewer briefly attended Officer Candidate School at Fort Gordon, Ga.

His military assignments took him to Germany and South Korea, and he held a number of sensitive positions with the National Military Command System Support Center at the Pentagon; the Defense Intelligence Agency at Fort Ritchie, Md.; and the National Emergency Airborne Command Post at Andrews AFB, Md., and Offutt AFB, Neb.

While with the National Emergency Airborne Command Post, Mr. Brewer flew aboard the Boeing 747 E-4B aircraft as the noncommissioned officer in charge of the graphics section.

There are only four E-4B aircraft in the Air Force inventory, with one constantly on alert. The 747

E-4B serves as the operations center for the National Command Authorities.

In case of national emergency or destruction of ground command control centers, the aircraft provides a modern, highly survivable, command, control and communications center to direct U.S. forces, execute emergency war orders and coordinate actions by civil authorities.

During Mr. Brewer's assignment as the graphics section NCOIC, he produced briefing aids that received favorable comments by the president of the United States as well as senior-level Department of Defense and armed forces officials.

After leaving the military, Mr. Brewer attended San Antonio College where he received an Associate of Arts degree in design and drafting and completed courses in electrical engineering. He then went to work for several civilian firms and the Texas Department of Highways and Transportation before his appointment at Kelly.

At AFCEE, Mr. Brewer produced a variety of paper and video products, from posters to AFCEE promotional videos, and was a contributing photographer for this publication.

Mr. Brewer said he plans to stay active in his retirement, working fulltime at what he had been doing in his spare time for many years, which is still and video photography and drawing caricatures at special events.

Still serving the USA



New AFCEE employee Eugene Hanley with the awards and medals he received in his 24-year Army career.

Army retired **Sgt. First Class Eugene Hanley** recently joined the AFCEE-wide Support Contracting Division as a contract closeout administrator. He is employed with Monterey Consultants, a minority-owned small business based in Dayton, Ohio.

Mr. Hanley was born on the West Indies island of Nevis in the Caribbean but after visiting a sister in the Bronx, N.Y., decided to stay in the United States.

He joined the Army in 1980 and worked in personnel administration until he retired 24 years later.

Mr. Hanley served a number of tours in

Germany and participated in operations Desert Shield and Desert Storm from 1990 to 1991.

He came to San Antonio in August 2000, assigned first to a military intelligence battalion at Lackland AFB and then to the Joint Information Operations Center at the former Kelly AFB.

In October 2002 he went to South Korea where he served as a personnel sergeant with the Second Infantry Division.

Planning to retire in San Antonio after his tour of Korea, he placed his resume on a Website in hopes of getting a civilian job when he returned to the United States.

Mr. Hanley received a call from Monterey Consultants when he was still in Korea, and later, after settling in the Alamo City, went for a job interview and was hired immediately.

He is currently pursuing a bachelor's degree in business at Wayland Baptist University, and plans to graduate next May.



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*Workers install the ironwork before the foundation is poured for the new fuel fill stand at Laughlin AFB, Texas.
See story page 9.*